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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,406	09/05/2003	Harald Bauer	2002DE132	7381
25255	7590	12/21/2005	EXAMINER	
CLARIANT CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 4000 MONROE ROAD CHARLOTTE, NC 28205				THEXTON, MATTHEW
ART UNIT		PAPER NUMBER		
		1714		

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/656,406	BAUER ET AL.
	<b>Examiner</b> Matthew A. Thexton	<b>Art Unit</b> 1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 31 October 2005.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-46 is/are pending in the application.  
 4a) Of the above claim(s) 2-6,25,27-40 and 45 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,7-24,26,41-44 and 46 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) 1-46 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4 sheets</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____ .                                  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The IDS of 2004 March 23, 2004 March 8, 2004 May 12, 2005 May 26, and 2005 November 30 are acknowledged and have been considered.

Applicant is requested to explain the pertinence of US 5879920, cited in the IDS of 2005 May 26.

Citations of US patent applications and USPTO office actions have been lined through because they are not published documents. Their content has been considered.

### ***Election/Restrictions***

Applicant's election without traverse of mixtures of "aluminum salt of diethylphosphonic acid" and "alkylalkoxylate (see page 10, paragraph 45 of the specification)" in the reply filed on 2005 October 31 is acknowledged. The election of "alkylalkoxylate" is taken to mean the alkyl ethers of the alcohols in paragraph 45 and further to include those of paragraph 99 and those "monoalkyl ethers of polyethylene glycol" of paragraph 101. Although the election requirement was for a specific compound, that is relaxed for the additive since the genus of alkylalkoxylates may be searched without undue burden.

Claims 2-6, 25, 27-40, and 45 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable

generic or linking claim. Election was made **without** traverse in the reply filed on 2005 October 31.

***Specification***

The disclosure is objected to because of the following informalities: Paragraph 129, 130, and Table 2 employ acronyms which are not defined: GR PBT, GR PA 66, and PBT.

After paragraph 147 is recited "Example 17" which also is referenced in Table 3; but there is no description of this example.

Appropriate correction is required.

***Claims Version***

The claims as preliminarily amended on 2003 September 5 have been examined.

***Claims Analysis***

Claim 1 is directed to compacted flame retardant mixture comprising:

- an organophosphorus flame retardant component;
- compacted with or without compacting auxiliary.

Dependent claims 2-6 specify the organophosphorus component as one or more specific phosphinic acid salts as component A. Claims 3-6 are interpreted as intending to be dependent upon claim 2.

Dependent claims 7-10 and 16 require further components of various specificity.

Dependent claim 11 fails to identify the claim from which it depends and further specifies component B is selected from synthetic inorganic compound and mineral product.

Claim 12 depends on claim 10 and further specifies component B is selected from oxygen compound of Si, magnesium compounds, metal carbonates of Group 2, red phosphorus, and aluminum compounds.

Claim 13 depends on 12 and further specifies the compounds.

Claim 14 depends of claim 1 and further specifies component C, being at least one nitrogen compound.

Claim 15 depends on claim 14 and further specifies the nitrogen compound.

Claim 17 depends on claim 1 and specifies median particle size.

Claim 18 depends on claim 1 and specifies average bulk density.

Claim 19 depends on claim 1 and specifies the ratio of auxiliary to organophosphorus component.

Claims 20-28 depend directly or indirectly on claim 1 and are directed to methods of making the compacted mixtures under variously specified amounts of pressure, using roller compaction, and variously specified auxiliary.

Claims 29-40 depend directly or indirectly on claim 1 and are directed to the compacted mixture further comprising polymer.

Claim 41 depends on claim 1 and specifies median particle size.

Claim 42 depends on claim 1 and specifies average bulk density.

Claim 43 and 44 depend on claim 1 and specify the ratio of auxiliary to organophosphorus component.

Claim 45 depends on claim 20 and specifies the auxiliary selected from carnauba waxes and montan waxes.

Independent claim 46 is directed to compacted flame retardant mixture made [by] a process comprising the step of compacting, with or without a compacting auxiliary.

### ***Claim Objections***

Claims 3-6 are objected to because of the following informalities: It appears they are intended to depend from claim 2 since they refer to limitations introduced in that claim. Appropriate correction is required.

Claim 46 is objected to because of the following informalities: It appears the word "by" is omitted after "composition made." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 7-24, 26, 41-44, and 46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 7-24, 26, 41-44, and 46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Examples 1-5 and 7, and Applicant's elected specie, are recited as the aluminum salt of "diethylphosphonic acid." Diethylphosphonic acid is a term found in the patent literature, but its structure is the diester, more properly named diethylphosphonate, see Klee et al. (US 2003/0055124A1). Applicant has not described or enabled this class of compounds.

Claims 1, 7-24, 26, 41-44, and 46 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for examples 6 and 8-10, does not reasonably provide enablement for all organophosphorus flame retardants nor for all organophosphorus flame retardants combined with any other ingredient subsumed under the label "compacting auxiliary." The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Case law holds that applicant's specification must be "commensurately enabling [regarding the scope of the claims]." See Ex Parte Kung, 17 USPQ2d 1545, 1547 (Bd.

Pat. Appl. Inter. 1990). Otherwise undue experimentation would be involved in determining how to practice and use applicant's invention. The test for undue experimentation as to whether or not all compounds within the scope of claims 1, 7-24, 26, 41-44, and 46 can be used as claimed and whether claims 1, 7-24, 26, 41-44, and 46 meet the test is stated in Ex parte Forman, 230 USPQ 546, 547 (Bd. Pat. Appl. Inter. 1986) and In re Wands, 8 USPQ2d 1400 (Fed. Cir. 1988). Upon applying this test to claims 1, 7-24, 26, 41-44, and 46 it is believed that undue experimentation would be required because:

(a) The quantity of experimentation necessary is great since claims 1, 7-24, 26, 41-44, and 46 read on any type of organophosphorus flame retardants combined with any other ingredient subsumed under the label "compacting auxiliary" such as melamine phosphates, trialkyl, alkylaryl, and triaryl phosphates, organophosphonates, etc., combined with auxiliaries such as polytetrafluoroethylene anti-dripping agent.

(b) There is no direction or guidance presented for making mixtures comprising any type of organophosphorus flame retardants combined with any other ingredient subsumed under the label "compacting auxiliary." When is the mixture successful? To what is it compared? How much dusting is acceptable? Is less dispersion-ability in polymers acceptable? How much less?

(c) There is an absence of working examples concerning making mixtures comprising any type of organophosphorus flame retardants combined with any other ingredient subsumed under the label "compacting auxiliary."

In light of the above factors, it is seen that undue experimentation would be necessary to make and use the invention of claims 1, 7-24, 26, 41-44, and 46.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 7-24, 26, 41-44, and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "compacted" is relative and indefinite. Does it include pinching between fingers, or granulating?

The term "compacting auxiliary" is indefinite. Does it facilitate compacting in some way, such as act as a lubricant, mold releasant, dust suppressant, bindant, or what?

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew A. Thexton whose telephone number is 571-272-1125. The examiner can normally be reached on Tuesday-Friday, 9:30 to 7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan S. Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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